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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,267	02/27/2002	Duane S. Stackhouse	053168-5024	1215
28977	7590	10/03/2003	EXAMINER	
MORGAN, LEWIS & BOCKIUS LLP 1701 MARKET STREET PHILADELPHIA, PA 19103-2921			KAO, CHIH CHENG G	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/085,267

Applicant(s)

STACKHOUSE, DUANE S.

Examiner

Chih-Cheng Glen Kao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 4 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

(Fig. 1, #282), (Fig. 20A, #1020), (Fig. 21, #2110 and 2115), (Fig. 22A, #1160), (Fig. 22B, #1122), (Fig. 23, #1302 and 1306), (Fig. 27A, #2762), (Fig. 35, #3822, 3804, 3810, and 3820), and (Fig. 36, #3620, 3810 and 3648).

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Page 70, line 3, "1404, 1406, 1408"

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Specification*

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The disclosure is objected to because of the following informalities. On page 11, Figures 8a and 8b are not specifically described in the Brief Description of the Drawings. Appropriate correction is required.

*Claim Objections*

5. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s) or amend the claim(s) to place the claim(s) in proper dependent form.

The limitations of claim 4 have already been recited in the following areas of claim 1:  
“wherein the adhesive pad includes two substantially planar faces (claim 1, line 2), each one of the planar faces is coated with an adhesive (claim 1, lines 2-3), that facilitates affixing said optical device (claim 1, lines 3-4).

6. Claim 6 is objected to because of the minor informalities, including grammatical errors and errors which appear to be minor draft errors creating lack of antecedent basis problems:

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(claim 6, line 11, "said plurality of electric lead interconnects") and (claim 8, lines 8-9, "a first affixing said optical transmitter").

The objections may be obviated by the following respective suggestions: (claim 6, line 11, deleting "electric") and (claim 8, lines 8-9, inserting - -of- - after "affixing" in line 9).

For purposes of examination, the claims will be treated as such. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffmeyer (US Patent 5757073).

8. With regards to claims 1 and 4, Hoffmeyer discloses an apparatus comprising an adhesive pad (Fig. 2, #36) including two substantially planar faces (Fig. 2, planar faces of #36), each one of said planar faces coated with an adhesive (Fig. 2, #30 and 38), said adhesive pad having a prescribed thickness (Fig. 2, #36).

With regards to the following recitations: "for mounting an optical device" and "facilitating mounting said optical device to a circuit board so the optical device remains affixed through a range of operating temperature and pressures", a recitation with respect to the manner

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in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

9. With regards to claim 2, Hoffmeyer further discloses the pad including copper (col. 6, lines 7-10).

10. With regards to claim 3, Hoffmeyer further discloses the apparatus including a surface mount (surface mount in Fig. 2).

11. With regards to claim 5, Hoffmeyer further discloses the adhesive as electrically conductive (col. 6, lines 1-3).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wachtler et al. (US Patent Application Publication 2001/0035576) in view of Hoffmeyer.

13. With regards to claims 1 and 4, Wachtler et al. discloses an apparatus of mounting an optical device (Abstract and Fig. 7) comprising an adhesive pad (Fig. 7, #20 and 22) for

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mounting the device (Fig. 7, #16) to a circuit board (Fig. 7, #24) so the device remains affixed through a range of temperatures and pressures, said adhesive pad having a predetermined thickness (inherent).

However, Wachtler et al. does not disclose an adhesive having two substantially planar faces coated with adhesive.

Hoffmeyer teaches an adhesive having two substantially planar faces coated with adhesive (col. 8, lines 29-30).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the adhesive of Hoffmeyer with the device of Wachtler et al., since the adhesives of Hoffmeyer and Wachtler et al. are considered art-recognized equivalents in that they both are used to put components related to chips together. It would have been within ordinary skill in the art to substitute one element for the other. One would be motivated to use the adhesive of Hoffmeyer for assembly cost reduction as shown by Hoffmeyer (col. 8, lines 8-10).

14. With regards to claim 2, Wachtler et al. in view of Hoffmeyer suggests a device as recited above.

However, Wachtler et al. does not disclose an adhesive including copper.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have an adhesive including copper with the with the device of Wachtler et al. in view of Hoffmeyer, since it would be within the general skill of a worker in the art to

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select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

15. With regards to claim 3, Wachtler et al. further discloses a surface mount (Fig. 7, #24).

16. With regards to claim 5, Wachtler et al. in view of Hoffmeyer suggests a device as recited above.

However, Wachtler et al. does not disclose the adhesive as electrically conductive.

Hoffmeyer teaches the adhesive as electrically conductive (col. 8, lines 12-14).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the electrically conductive adhesive in the device of Wachtler et al. in view of Hoffmeyer, since one would be motivated to use the adhesive for a chip carrier as shown by Hoffmeyer (col. 8, lines 10-15).

17. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jang (US Patent 6516130) in view of Wachtler et al. and Hoffmeyer.

18. With regards to claims 6 and 7, Jang discloses a surface mount apparatus for mounting an optical device (Fig. 1) comprising an element affixing the optical device to a circuit board wherein the optical device remains affixed through a range of operating temperature and pressures, said optical device having a device package and a plurality of interconnects, said device package having a baseplate vertically separated from the interconnects by a first distance,



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said circuit board having a mounting region vertically separated from electric connection portions by a second distance, which attach to the lead interconnects.

However, Jang does not disclose an adhesive having two substantially planar faces coated with adhesive nor the pad having a thickness to compensate for the first and second distances.

Wachtler et al. teaches using adhesives (Abstract). Hoffmeyer teaches an adhesive having two substantially planar faces coated with adhesive (col. 8, lines 29-30).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the adhesive of Wachtler et al. with the device of Jang, since the adhesive of Wachtler et al. and the screws for affixing of Jang (col. 1, lines 11-14) are considered art-recognized equivalents in that they both are used mechanically fasten components together. It would have been within ordinary skill in the art to substitute one element for the other. One would be motivated to use the adhesive of Wachtler et al. for high density interconnections as shown by Wachtler et al. (Paragraph 52).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the adhesive of Hoffmeyer with the device of Jang, since the adhesives of Hoffmeyer and Jang are considered art-recognized equivalents in that they both are used to put components related to packages together. It would have been within ordinary skill in the art to substitute one element for the other. One would be motivated to use the adhesive of Hoffmeyer for assembly cost reduction as shown by Hoffmeyer (col. 8, lines 8-10).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have a pad to compensate for distances with the device of Jang in view of Wachtler et al. and Hoffmeyer, since such an arrangement only requires a change in the size of

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components. Since the use of an adhesive is an obvious modification, the use of the adhesive to compensate for the distances between the interconnections is just an obvious modification of the sizes of the pad and the lead interconnects. One would be motivated to have this arrangement to ensure that the interconnections are electrically connected.

19. Claims 8, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jang in view of Wachtler et al., Hoffmeyer, and Corradetti et al. (US Patent 5011246).

For purposes of being concise, Jang in view of Wachtler et al. and Hoffmeyer suggest a device as recited above.

However, Jang does not disclose an arrangement for a separate optical transmitter and receiver with the corresponding attachments in a transponder.

Corradetti et al. teaches an arrangement for an optical transmitter and receiver in a transponder (col. 1, lines 12-24).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the transceiver of Corradetti et al. with the device of Jang in view of Wachtler et al. and Hoffmeyer, since one would be motivated to incorporate this for optical communication.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have a separate transmitter and receiver with the corresponding attachments with the device of Jang in view of Wachtler et al, Hoffmeyer, and Corradetti et al., since rearranging and forming an integral structure in various elements only involves routine

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skill in the art. One would be motivated to have a separate transmitter and receiver to simplify replacement of parts if one should fail while the other still operates within normal parameters.

20. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jang in view of Wachtler et al., Hoffmeyer, and Corradetti et al. as applied to claim 8 above, and further in view of Nagase et al. (US Patent Application Publication 20020172476).

Jang in view of Wachtler et al., Hoffmeyer, and Corradetti et al. suggest a device as recited above.

However, Jang does not disclose a transmitter with a laser on a header, a laser driver on a hybrid subassembly, and an air trench between the two.

Nagase et al. teaches a transmitter (Title) with a laser (Fig. 1A, #4) on a header (Fig. 1A, #7, a laser driver (Fig. 1A, #6) on a hybrid subassembly (Fig. 1A, #1), and an air trench between the two (Fig. 1B, trench between #4 and 6).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the transmitter of Nagase et al. with the device of Jang in view of Wachtler et al., Hoffmeyer, and Corradetti et al., since one would be motivated to incorporate this to reduce cavity resonance and not degrade the performance of the elements as shown by Nagase et al. (Paragraph 16).

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*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



gk



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